

DaimlerChrysler AG

Patent Claims

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1. A method for changing the acceleration mode of a motor vehicle, wherein the acceleration mode can be changed by the driver between a normal acceleration mode and a rapid acceleration mode in which the supply  
10 of air and fuel is increased, characterized in that the change from the normal acceleration mode into the rapid acceleration mode is carried out if the driver exceeds a pedal-speed threshold value ( $V_{GP,Grenz}$ ) when activating the accelerator pedal.

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2. The method as claimed in claim 1, characterized in that the changeover from the normal acceleration mode into the rapid acceleration mode is independent of the current pedal position ( $s_{GP}$ ) of the accelerator pedal  
20 between a neutral home position and a maximum activation position.

3. The method as claimed in claim 1, characterized in that the change from the normal acceleration mode into  
25 the rapid acceleration mode is carried out only if the pedal position ( $s_{GP}$ ) of the accelerator pedal exceeds a switch-on threshold value.

4. The method as claimed in one of claims 1 to 3,  
30 characterized in that the acceleration in the rapid acceleration mode takes place with maximum engine drive torque.

5. The method as claimed in one of claims 1 to 4,  
35 characterized in that the type of driver is classified and the criteria for the change between the normal acceleration mode and the rapid acceleration mode are

determined as a function of the classification of the type of driver.

6. The method as claimed in claim 5, characterized in  
5 that the classification of the type of driver is carried out automatically by means of measurable driver reactions.

7. The method as claimed in one of claims 1 to 6,  
10 characterized in that ambient states are sensed using a sensor system which senses the surroundings, and if values which are critical for safety are reached a change from the normal acceleration mode into the rapid acceleration mode is prevented.

15 8. The method as claimed in claim 7, characterized in that the relative distance ( $s_{rel}$ ) from a vehicle travelling in front is sensed and a change from the normal acceleration mode into the rapid acceleration  
20 mode is prevented if the relative distance ( $s_{rel}$ ) becomes less than a safety distance ( $s_{rel,Grenz}$ ).

9. The method as claimed in one of claims 1 to 8,  
25 characterized in that the acceleration mode is changed over from the rapid acceleration mode into the normal acceleration mode if the driver returns the pedal position ( $s_{GP}$ ) in the direction of the neutral home position.

30 10. The method as claimed in one of claims 1 to 9, characterized in that when the acceleration mode changes the engine drive torque ( $M_{Mot}$ ) is changed in accordance with a predefined function of times.